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FIGURES

FIG. 1

```
ACCCACTTCCCACTTCTCCAATTCTTCCTTCCGCTTCCCAACTCCAACCCCAAAAGAAAA    50

ACTCAAAGTCAAGAACTAACAGAAAGAGCCCACAACTCATCTATTTTGAGGGGTTCTTGCC   120

ATTTTCATCCTTGTAACAATGGAGTTCGCAAATCAAGCACCTGAGAGCTCTACCCAAAA    180
                     M  E  F  A  N  Q  A  F  E  S  S  T  D  K

AAAATTCGGAAGAGGAAAGGTGCAGATTAAGCGGATCGAAAGACTACGATGCTGAAGT    240
K  L  G  R  G  R  V  E  I  K  R  I  E  N  C  T  N  R  Q  V

CACCTTCTGCAAACGCCGCAACGGATTGCCTTAAGAAAGCCTATGAATTGCTCTGTTGTGG    300
 T  F  C  K  R  R  N  G  L  L  K  K  A  Y  E  L  S  V  L  C

TGATGCTGAAGTTGCTCTTATCGTCTTCTCCACCCGTGGCCGCCGCTATGAGTATGCTAA    360
 D  A  E  V  A  L  I  V  F  S  T  R  G  R  R  Y  E  Y  A  N

CAACAGCGTTAGCAACAATCGACAGGTACAAAAAGCATCGCCTGATCCTACGGACGG    420
 N  S  V  R  A  I  I  D  R  Y  K  K  A  S  A  P  S  T  G  G  <-doma

GTCAGTTTGAGAGCAGCAGTACAACCCAGTACAGCAGGCAGAAAGTTCGAAGTTCTGAAG    480
 S  V  S  R  A  N  T  Q  Y  Q  Q  E  A  S  K  F  T  R  R

ACAGATCCCGAGAAATTCAGAATTCAAACAGGCATATACTGGCGGAATCCCTTAGCACCCT    540
 Q  I  P  E  I  Q  N  S  N  R  H  I  I  S  R  S  L  S  F  L

GAAAGTCAAGGACTGAAAAACCTAGAAGGAAGATTGGAGAAAGGAATCAGCAGAATAAG    600
 K  V  K  E  L  K  N  L  E  G  R  L  E  K  G  I  S  R  I  R

ATCCAAAAAGAATGAAATCCTGTTTTCTGAAATCGAATTCATGCAAAGAGAGGAGACTGA    660
 S  K  K  N  E  I  L  F  S  E  I  E  F  M  Q  R  E  E  T  E

GCTGCAACACCACAACAATTTTGTGAAGAGCAAAGATAGCTGAAAGCGAGAGGAACAGCA    720
 L  Q  H  H  N  N  F  V  K  R  K  I  A  E  S  R  S  Q  Q

GCAGCAGCAAACACATATGATTCCGGGAACTTCCTACGACCCGTCGATGGCTTCGAATTCC    780
 Q  Q  Q  T  H  M  I  P  G  T  S  Y  D  P  S  M  P  S  N  S

GTATGACAGGGACTTCTTCCCTGTGATCTTGGAGTCCAACAATAATAACCATTACCCTCGCCA    840
 V  D  R  D  F  F  P  V  I  L  E  S  N  N  N  H  Y  P  R  Q

AAGCCAGCAGCTCCAACTTGTCTGAAATGCTGGACTGCCGTCGATGTTCTCCTACC    900
 S  Q  Q  L  Q  L  S  E  M  L  D  C  R  R  M  F  S  Y  .

CATATTCTCGATCTGCTCCACAATTCCTATGAGACAACGAGCGTTCAGTTTCCATGCA    960

TTATCCACAAGCACTTTCCCCATCCTTCTCCATACCATATATATGCCTCATCATCCCACCCCC   1020

AATTCTGTGATAACATATACAGTAAATTTCATTTTCTCACCCCGA   1065
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FIG. 2

```
GCAATTCTTCCTTCCCGTTGCCAAGTGCAACCCCAATAGAAAAACTCAAAGTCAAGAACT 60

AGCTAACAGAGAAAACCACAATTCATCAATTTGGAGGGGTTTTTGCCATTTTTCATCCTT 120

GCAACAATGGAGTTCCCAAATCAAGCACCCGAGAGCTCCTCCCAGAAAAAATTGGGAAGG 180
         M  E  F  P  N  Q  A  P  E  S  S  S  Q  K  K  L |G  R| MADS-BOX
GGCAAAATTGAGATTAAGCGGATCGAAAACACTACAAATCGACAAGTTACCTTCTGCAAA 240
  |G  K  I  E  I  K  R  I  E  N  T  T  N  R  Q  V  T  F  C  K|
CGCCGCAACGGATTGCTTAAGAAAGCCTATGAATTGTCTGTTCTTTGTGATGCTGAAGTT 300
  |R  R  N  G  L  L  K  K  A  Y  E  L  S  V  L  C  D  A  E  V|
GCTCTTATCGTGTTCTCCAACCGTGGCCGCCTCTATGAGTATGCTAACAACAGTGTTAGA 360
  |A  L  I  V  F  S  N  R  G  R  L  Y  E  Y  A  N| N  S  V  R
GCAACAATCGACAGGTACAAAAAAGCATACGCTGATCCTACGAACAGTGGATCTGTTTCA 420
   A  T  I  D  R  Y  K  K  A  Y  A |D  P  T  N  S  G  S  V  S| K-domain
GAAGCCAACACTCAGTTTTATCAGCAGGAAGCATCCAAACTGCGAAGACAGATCCGAGAA 480
  |E  A  N  T  Q  F  Y  Q  Q  E  A  S  K  L  R  R  Q  I  R  E|
ATTCAGAATTCAAACAGGCATATACTGGGTGAAGCTCTTAGCTCCTTGAACGCCAAGGAA 540
  |I  Q  N  S  N  R  H  I  L  G  E  A  L  S  S  L  N  A  K  E|
CTGAAGAACCTAGAAGGAAGATTGGAGAAAGGAATCAGCAGAATAAGATCCAAAAAGAAT 600
  |L  K  N  L  E  G  R  L  E  K  G  I  S  R  I  R  S  K  K  N|
GAAATGCTGTTTTCTGAAATCGAATTCATGCAAAAAAGGGAGACCGAGCTGCAACACCAC 660
  |E  M  L  F  S  E  I  E  F  M  Q  K  R  E  T  E  L  Q  H  H|
AACAATTTTCTGAGAGCAAAGATAGCTGAAAACGAGAGGGAAGAGCAGCAGCATACACAC 720
  |N  N  F  L  R  A  K  I  A  E| N  E  R  E  E  Q  Q  H  T  H
ATGATGCCGGGAACTTCCTACGATCAGTCAATGCCTTCGCATTCTTATGACAGGAACTTC 780
   M  M  P  G  T  S  Y  D  Q  S  M  P  S  H  S  Y  D  R  N  F
CTCCCAGCGGTGATCTTGGAGTCCAACAATAACCATTACCCTCACCAAGTCCAGACAGCT 840
   L  P  A  V  I  L  E  S  N  N  N  H  Y  P  H  Q  V  Q  T  A
CTCCAACTTGTTTGAAATGCTGGACTGCCGTCTGAT 876
   L  Q  L  V  .
```

FIG. 3

```
 1   M E F A N Q A P E S S T Q K K L G R G K I E I K R I E N T T   MdMADS14
 1   M E F P N Q A P E S S S Q K K L G R G K I E I K R I E N T T   MdMADS16

31   N R Q V T F C K R R N G L L K K A Y E L S V L C D A E V A L   MdMADS14
31   N R Q V T F C K R R N G L L K K A Y E L S V L C D A E V A L   MdMADS16

61   I V F S T R G R L Y E Y A N N S V R A T I D R Y K K A C A D   MdMADS14
61   I V F S N R G R L Y E Y A N N S V R A T I D R Y K K A Y A D   MdMADS16

91   S T D G G S V S E A N T Q F Y Q Q E A S K L R R Q I R E I Q   MdMADS14
91   P T N S G S V S E A N T Q F Y Q Q E A S K L R R Q I R E I Q   MdMADS16

121  N S N R H I L G E S L S T L K V K E L K N L E G R L E K G I   MdMADS14
121  N S N R H I L G E A L S S L N A K E L K N L E G R L E K G I   MdMADS16

151  S R I R S K K N E I L F S E I E F M Q K R E T E L Q H H N N   MdMADS14
151  S R I R S K K N E M L F S E I E F M Q K R E T E L Q H H N N   MdMADS16

181  F L R A K I A E S E R E Q Q Q Q Q T H M I P G T S Y D P S M   MdMADS14
181  F L R A K I A E N E R E E Q Q H - T H M M P G T S Y D Q S M   MdMADS16

211  P S N S Y D R N F F P - V I L E S N N N H Y P R Q G Q T A L   MdMADS14
210  P S H S Y D R N F L P A V I L E S N N N H Y P H Q V Q T A L   MdMADS16

240  Q L V (100%)                                                 MdMADS14
240  Q L V (88.4%)                                                MdMADS16
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FIG.4
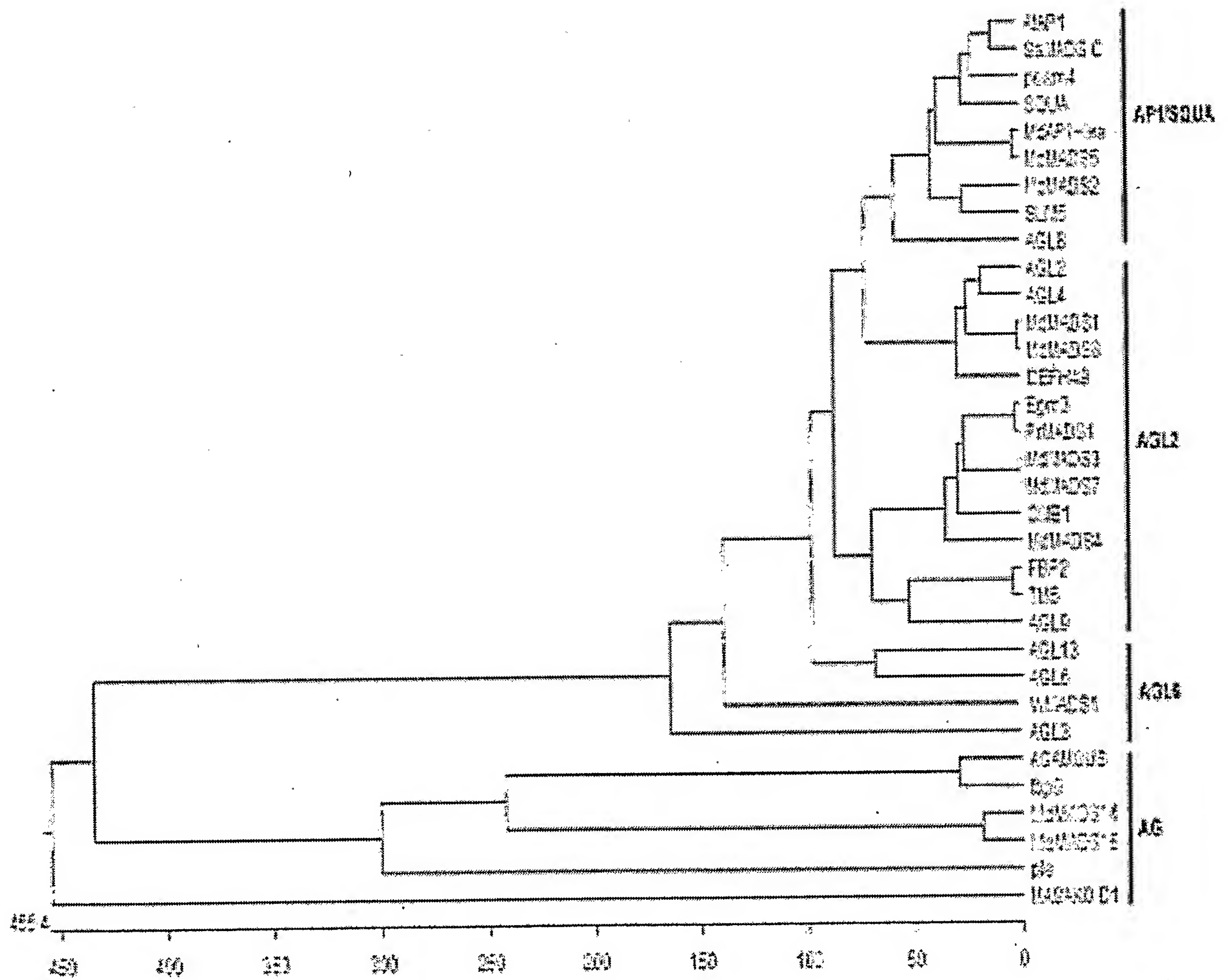
FIG. 5
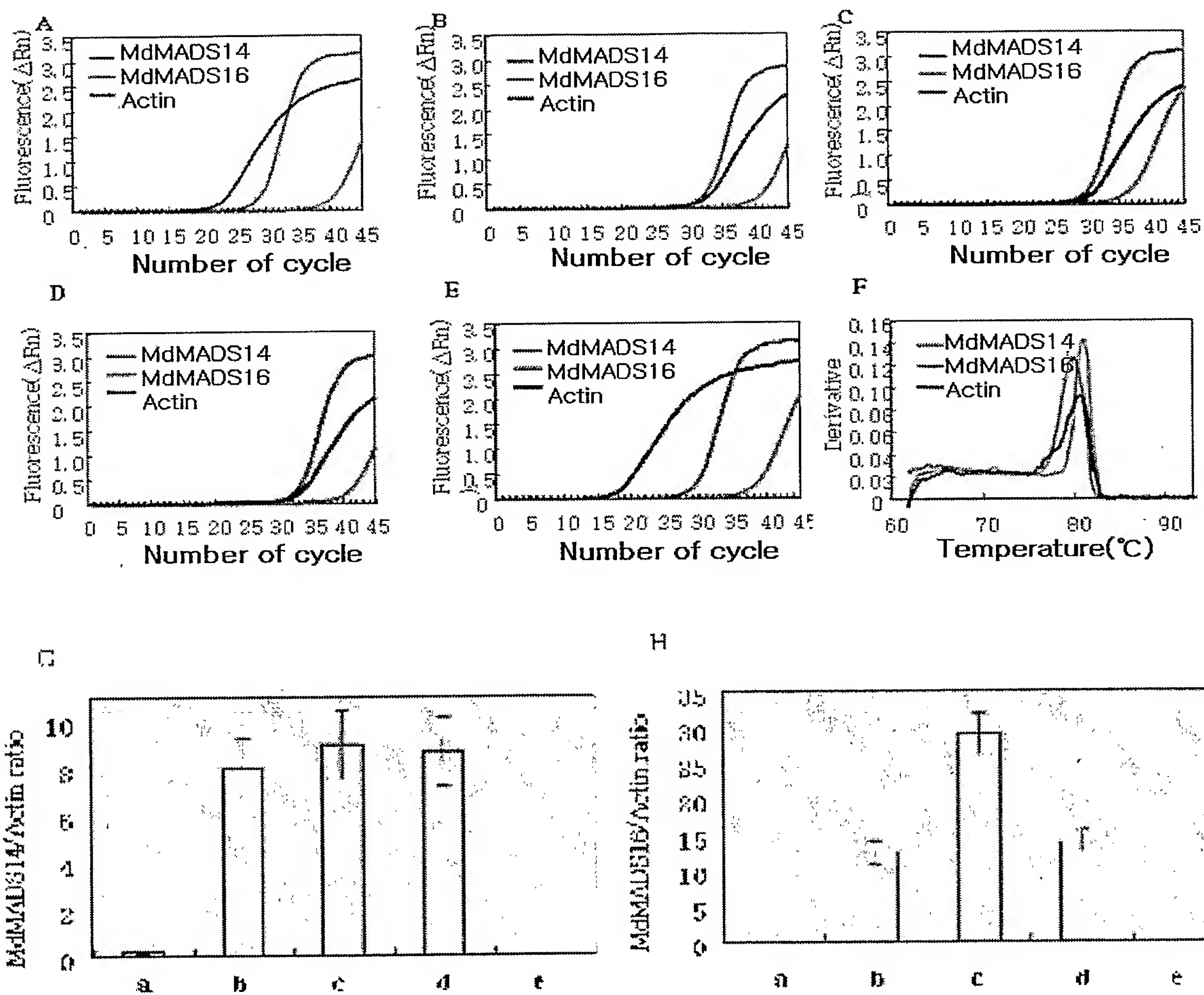
FIG. 6
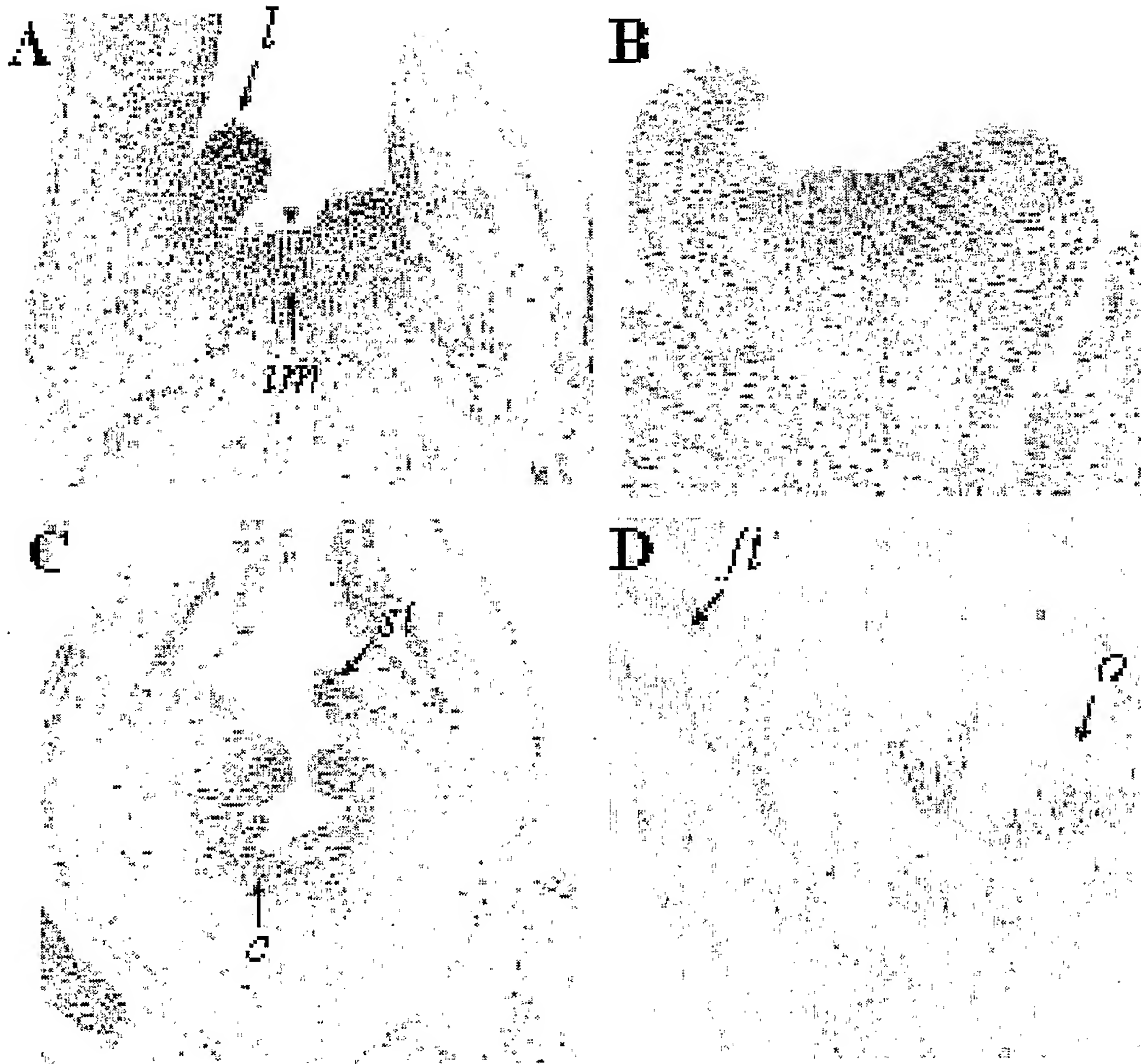
FIG. 7
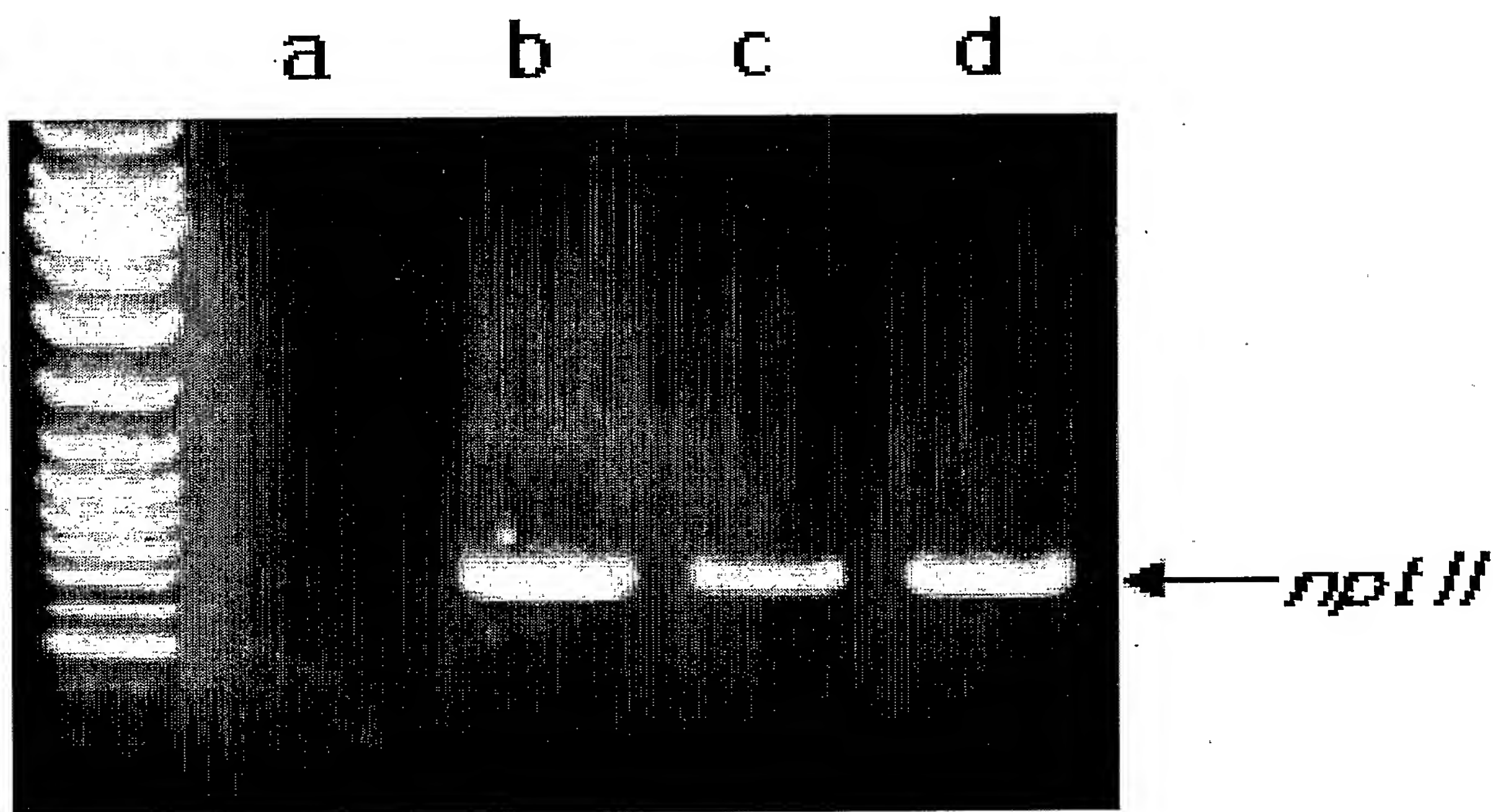
FIG. 8

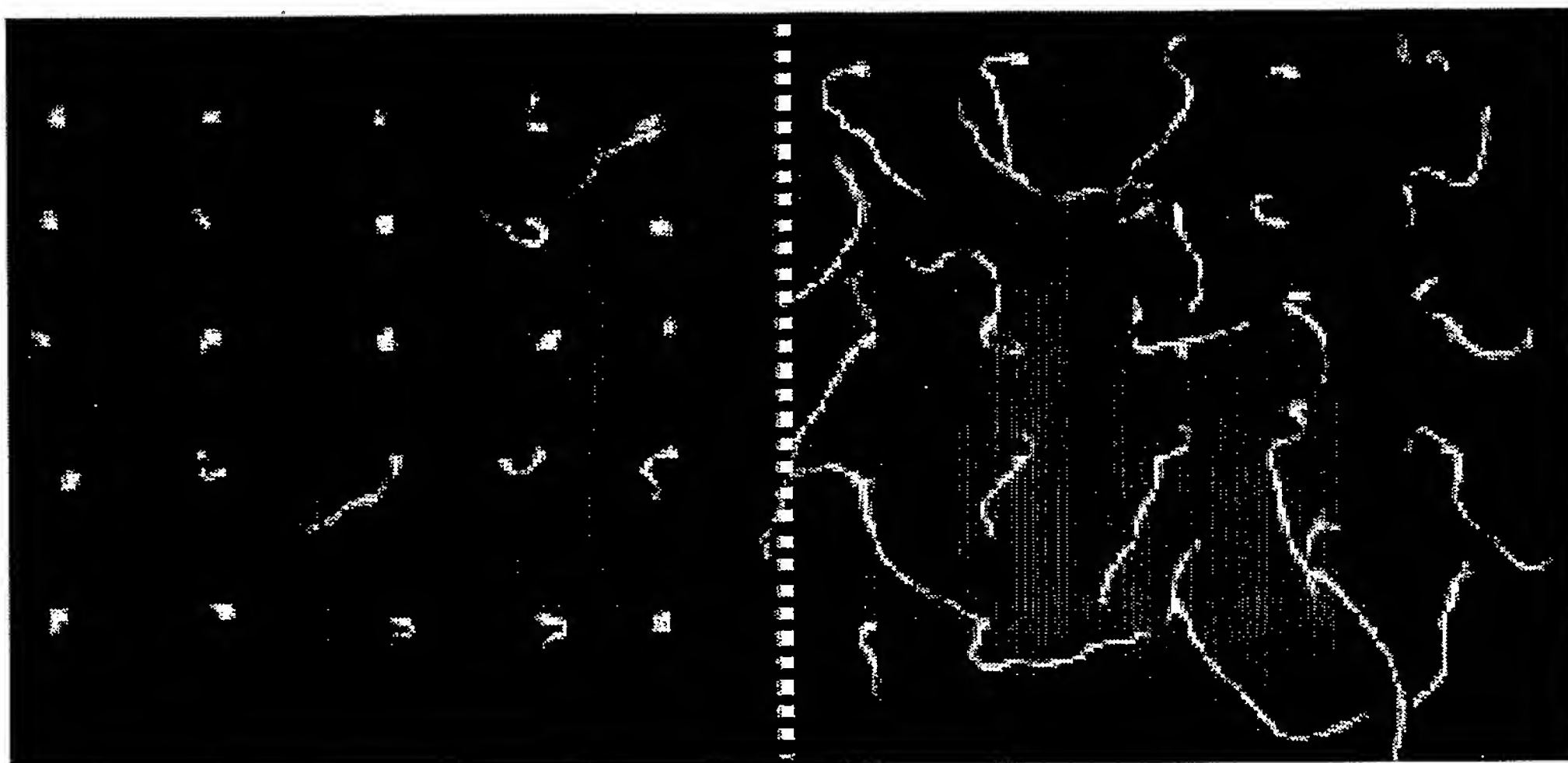Wild type   MdMADS14
                             Sense 1
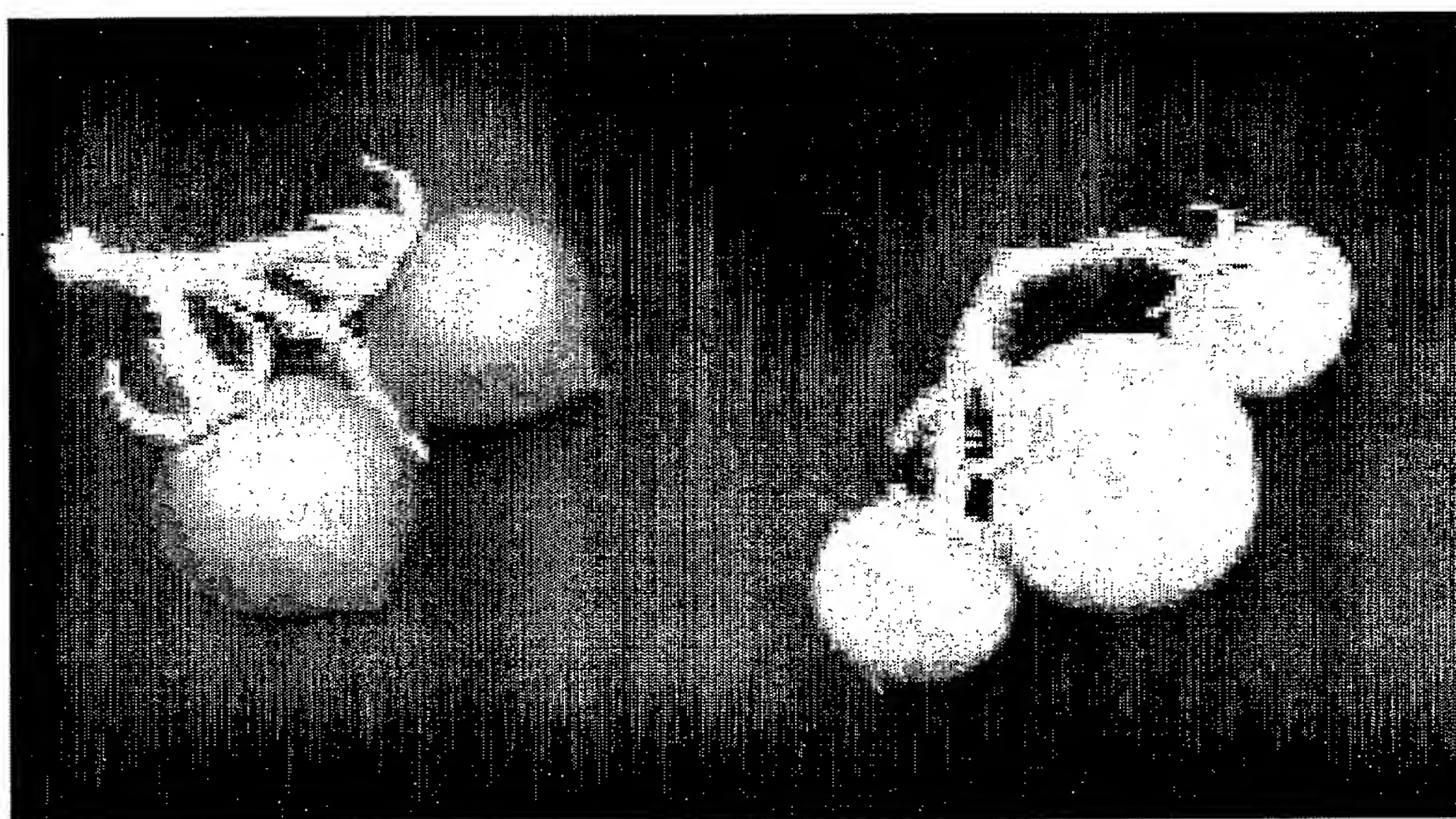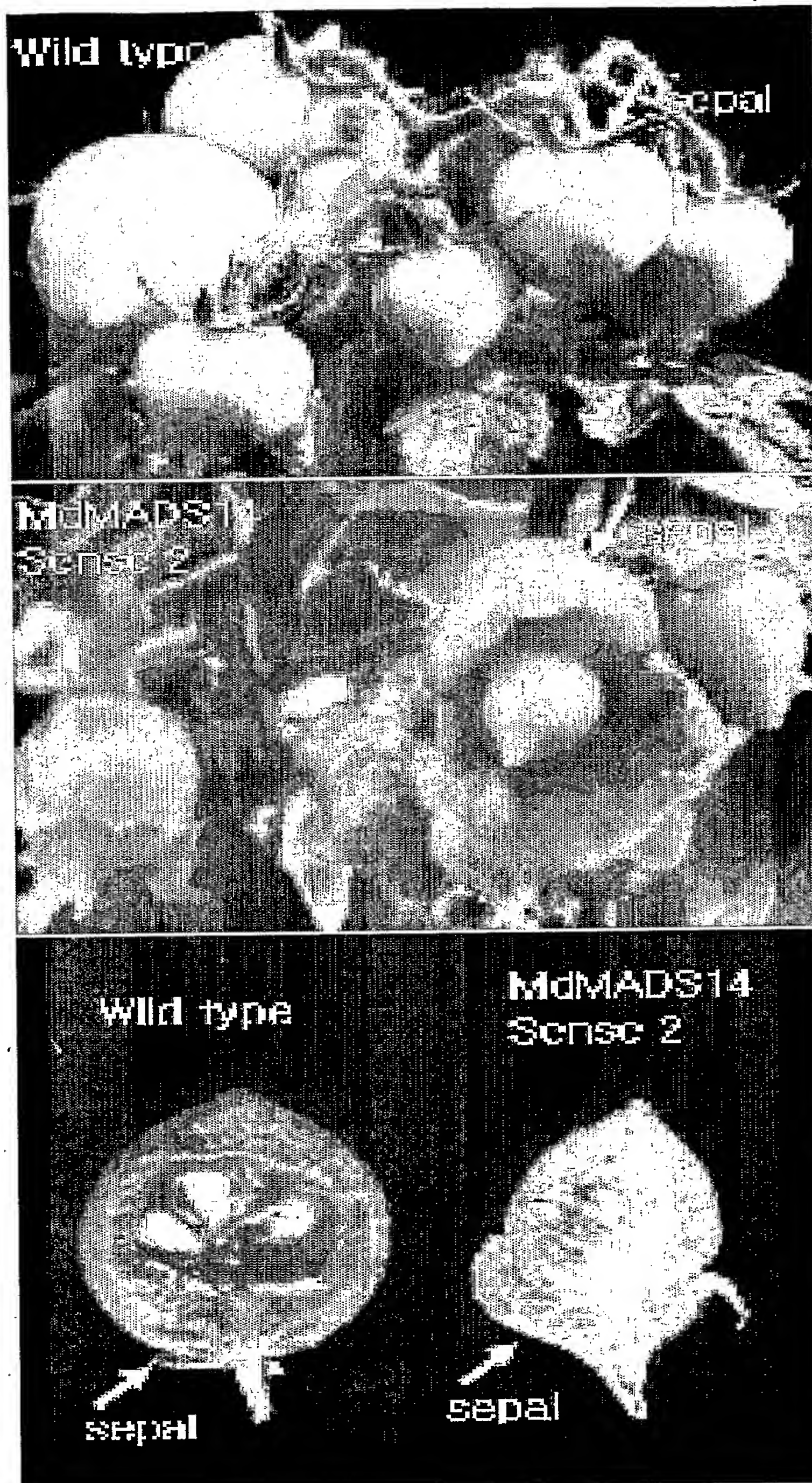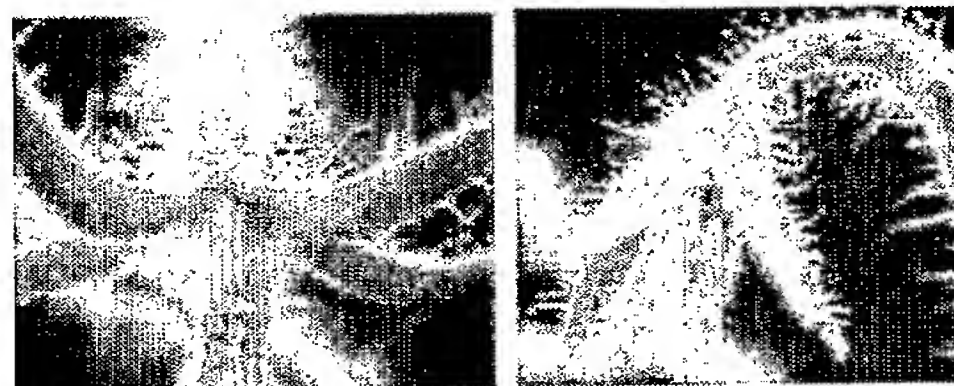
FIG. 9

FIG. 10
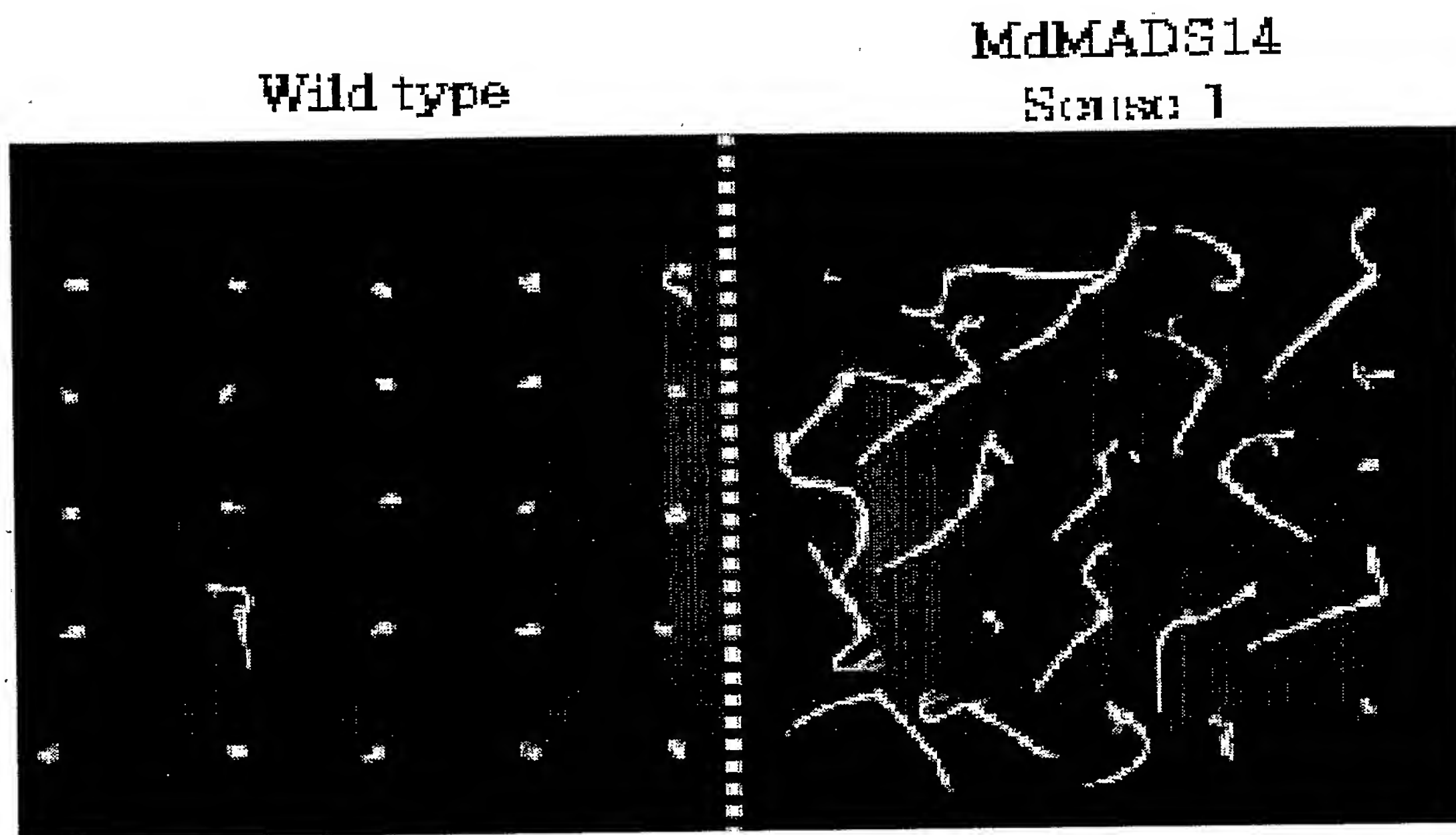
Wild type

MdMADS14
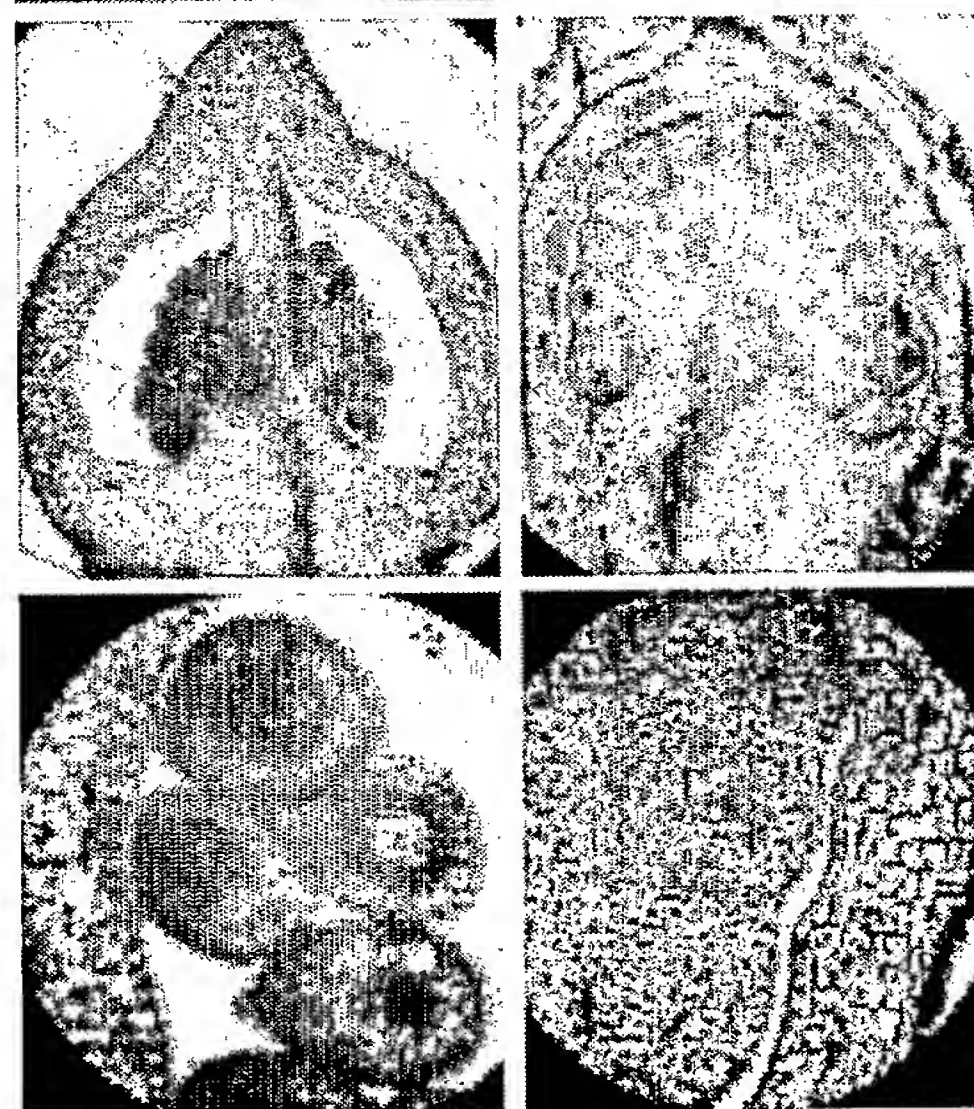Sense 1

FIG. 11

FIG. 12
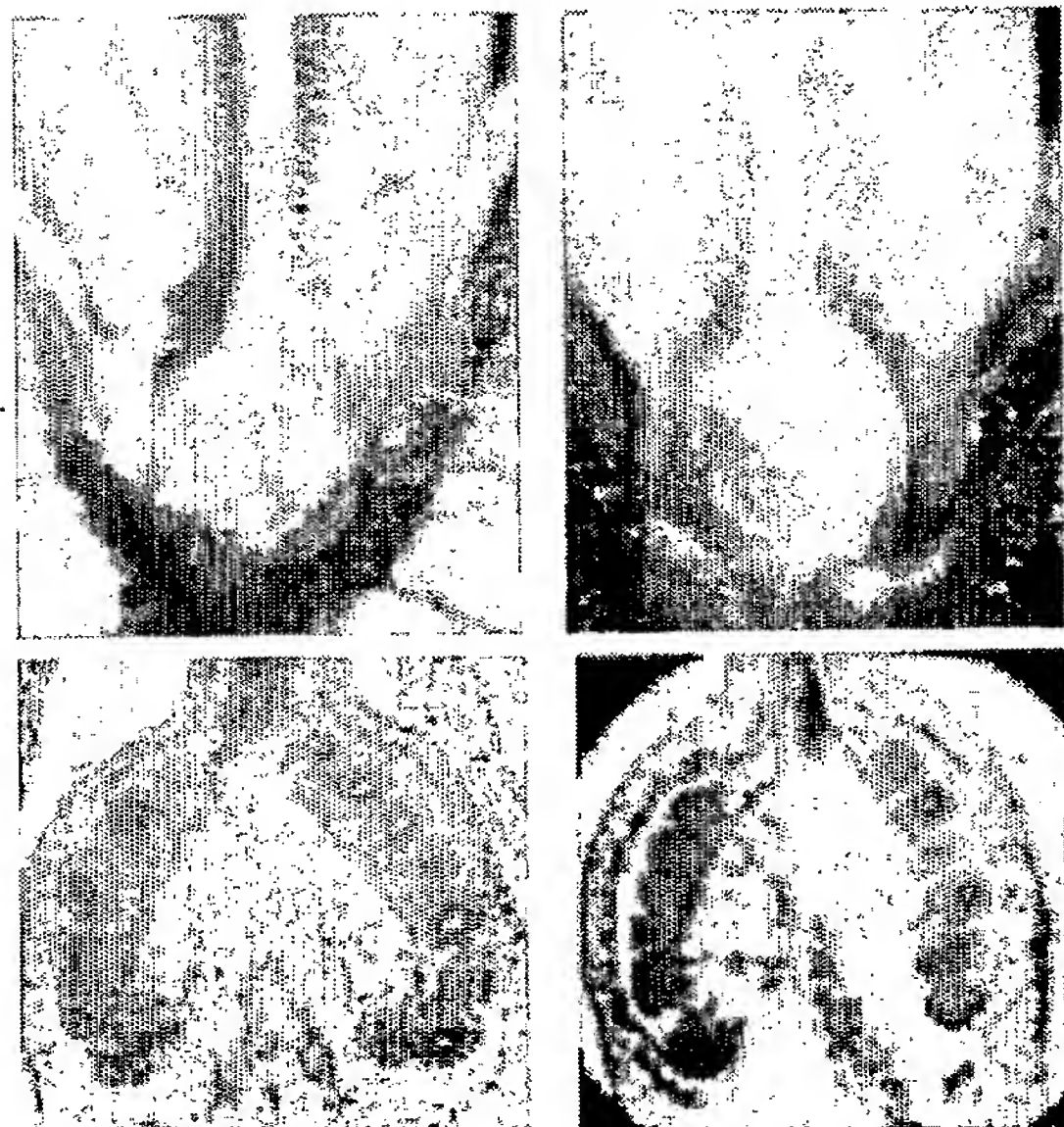
(a)

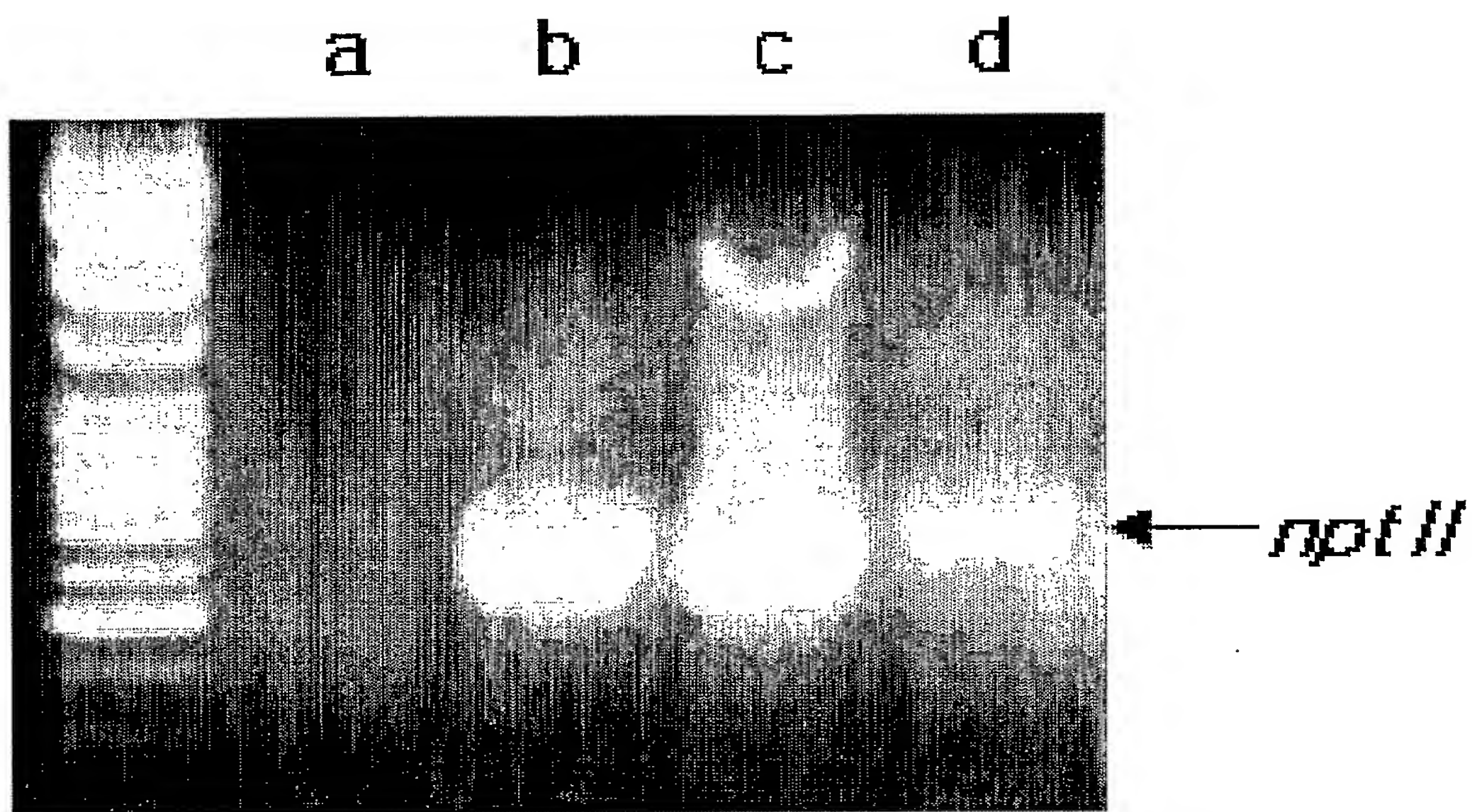Wild type   MdMADS14 Anti-sense

(c)

Wild type   MdMADS14 Anti-sense

(b)

Wild type   MdMADS14 Anti-sense

FIG. 13

FIG. 14

FIG. 15

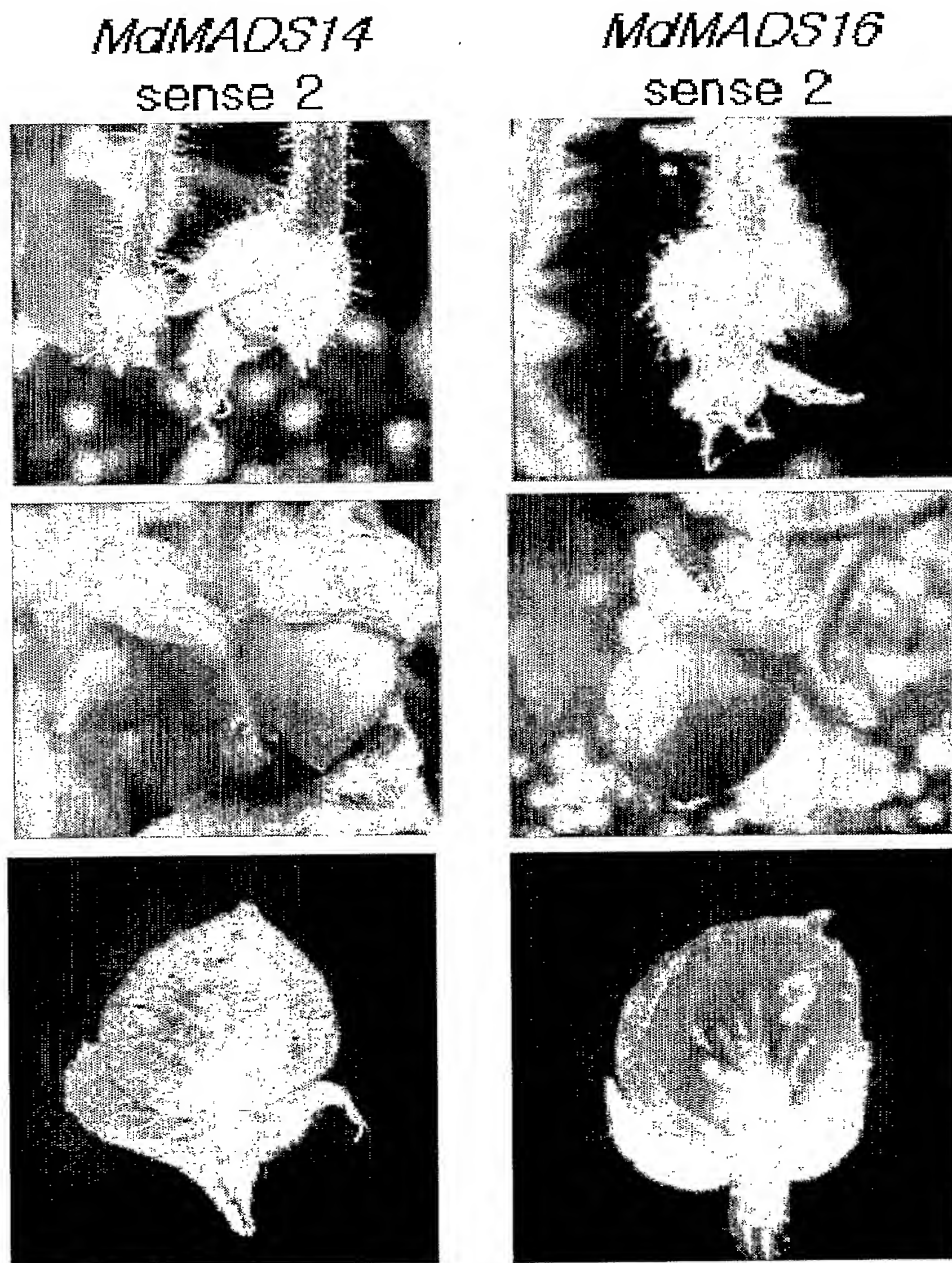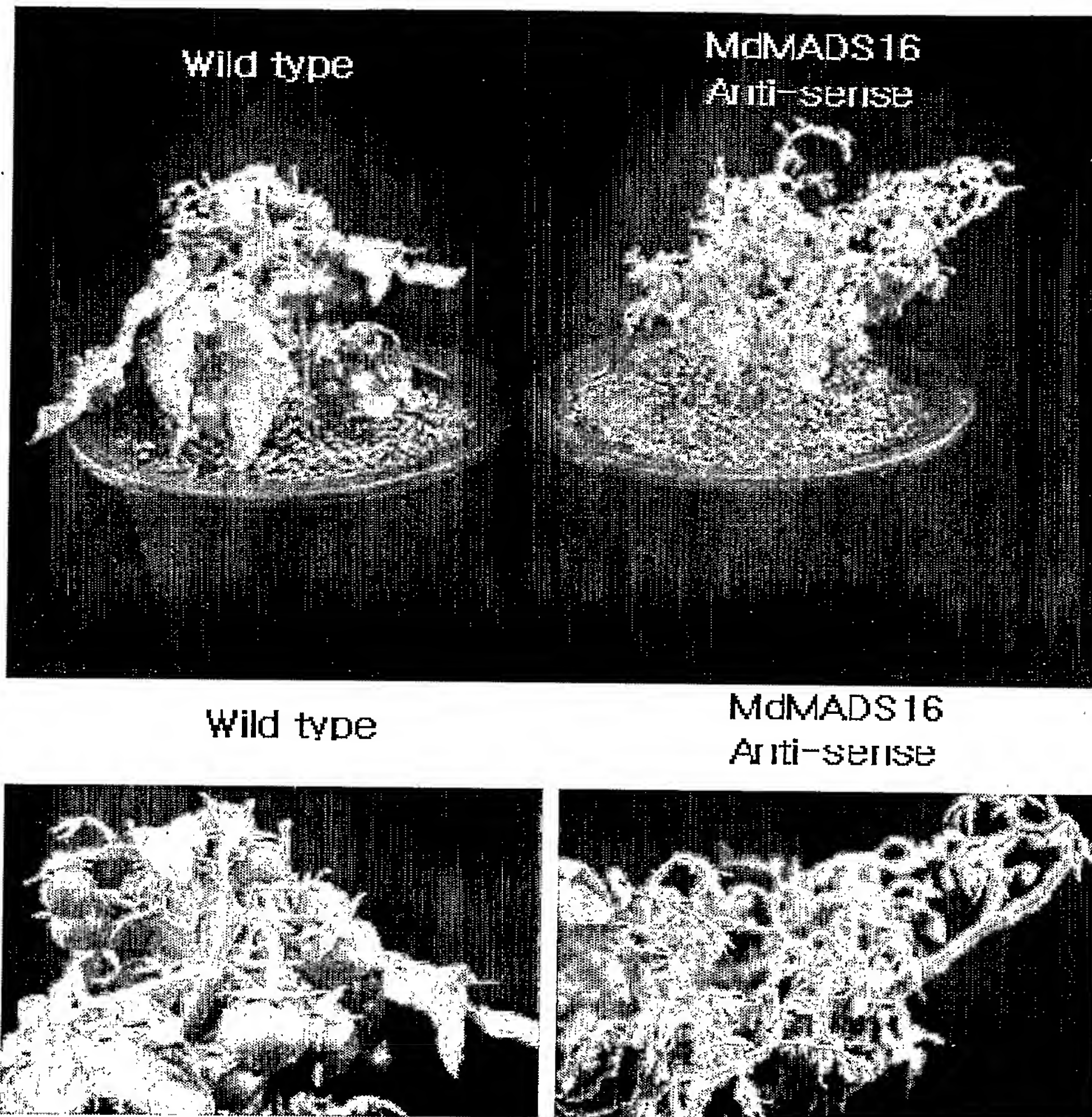*MdMADS14* sense 2

MdMADS16 sense 2

FIG. 16

FIG. 17

FIG. 18

FIG. 19